Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A variable length stent deployment apparatus for use in a body vessel comprising:

a flexible catheter body having a proximal end and a distal end adapted for positioning in the vessel;

a stenting structure releasably held by the catheter body in an unexpanded configuration, the stenting structure having a total length and being movable from the unexpanded configuration to an expanded configuration adapted to engage a wall of the vessel; and

a deployment mechanism coupled to the catheter body adapted to apply a radially outward force along a selected length of the stenting structure to deploy a portion of the stenting structure having ~~said~~ the selected length at one time, wherein the deployed portion having ~~said~~ the selected length is released into the vessel in the expanded configuration while a remaining portion of the stenting structure unconnected to the deployed portion remains releasably held by the catheter body in the unexpanded configuration and wherein the deployment mechanism is coupled to an actuator at the proximal end of the catheter body which allows the selected length that is expanded at one time to be varied from less than the total length up to substantially all of the total length while the catheter is positioned in the vessel.

2. (Previously presented) The variable length stent deployment apparatus of claim 1 wherein the stenting structure comprises a plurality of stent segments, the deployment mechanism being adapted to select one or more of the stent segments for inclusion in the deployed portion.

3. (Previously presented) The variable length stent deployment apparatus of claim 2 wherein the deployment mechanism is adapted to deploy the plurality of stent segments simultaneously.

4. (Currently amended) The variable length stent deployment apparatus of claim 2 further comprising a constraining element for constraining expansion of stent segments which are not to be deployed.

5. (Previously presented) The variable length stent deployment apparatus of claim 4 wherein the constraining element is a sheath retractably disposed over the stent structure and deployment mechanism.

6. (Previously presented) The variable length stent deployment apparatus of claim 1 wherein the deployment mechanism comprises an expandable member on the catheter body, the portion of the stenting structure to be deployed being positionable over the expandable member for expansion thereby.

7. (Previously presented) The variable length stent deployment apparatus of claim 6 wherein the length of the expandable member can be selected to provide a preselected length of the deployed portion.

8. (Original) The variable length stent deployment apparatus of claim 7 wherein the length of the expandable member can be modified by a sheath slidably disposed over the expandable member for constraining expansion of a selected portion of the expandable member.

9. (Original) The variable length stent deployment apparatus of claim 6 wherein the stenting structure is movable relative to the expandable member, further comprising a stent positioner for moving a selected portion of the stenting structure relative to the expandable member.

10. (Previously presented) The variable length stent deployment apparatus of claim 1 further comprising a valve member on the catheter body adapted to separate the portion of the stent structure to be deployed from the remaining portion.

11. (Previously presented) The variable length stent deployment apparatus of claim 1 wherein the stenting structure has a leading end closest to the distal end of the catheter body, and the portion of the stenting structure to be deployed extends proximally a selectable length from the leading end thereof.

12. (Currently amended) A variable length stent deployment apparatus for use in a body vessel comprising:

a flexible catheter body having a proximal end and a distal end adapted for positioning in the vessel;

a stenting structure releasably held by the catheter body in an unexpanded configuration, the stenting structure being movable from the unexpanded configuration to an expanded configuration adapted to engage a wall of the vessel; and

a deployment mechanism coupled to the catheter body adapted to apply a radially outward force along a selected length of the stenting structure to deploy a portion of the stenting structuring having said length, wherein the deployed portion having said length is released into the vessel in the expanded configuration while a remaining portion of the stenting structure remains releasably held by the catheter body in the unexpanded configuration, ~~The variable length stent deployment apparatus of claim 1~~ wherein the stenting structure is continuous throughout the length thereof, and the deployment mechanism is adapted to engage a selected location along said stenting structure to separate the portion of the stenting structure to be deployed from a remaining portion of the stenting structure.

13. (Cancelled)

14. (Previously presented) The variable length stent deployment apparatus of claim 12 wherein the deployment mechanism is adapted to release the deployed portion of the stenting structure distally from the distal end of the catheter body.

15. (Previously presented) The variable length stent deployment apparatus of claim 12 wherein the stenting structure is severed by the deployment mechanism following deployment from the catheter body.

16. (Original) The variable length stent deployment apparatus of claim 12 wherein the stenting structure is a coil.

17. (Original) The variable length stent deployment apparatus of claim 12, wherein the stenting structure is a mesh.

18. - 19. (Cancelled).

20. (Currently amended) A method of deploying a stent of selectable length in a vessel, the method comprising:

endovascularly positioning a catheter in the vessel, the catheter having a distal end and stenting structure releasably disposed therein, the stenting structure having a total length;

uncovering a portion of the stenting structure prior to deployment from the catheter;

determining a desired stent length;

while the catheter remains positioned in the vessel, adjusting the length of the uncovered portion to be at least equal to the desired stent length; and

applying a radially outward force to the ~~stent~~ stenting structure to expand only the uncovered portion ~~from the catheter into the vessel~~, wherein the uncovered portion expands at one time to engage a wall of the vessel and separates from ~~while a~~ any remaining portion of the stenting structure which remains covered in the catheter, and wherein the length of the uncovered portion which expands at one time may be varied from less than the total length up to substantially all of the total length while the catheter is positioned in the vessel.

21. (Previously presented) The method of claim 20 wherein adjusting the length of the uncovered portion comprises positioning a first portion of the stenting structure shorter than the desired stent length in a position in the catheter for deployment, and positioning an additional portion of the stenting structure in the catheter adjacent to the first portion for deployment therewith.

22. (Previously presented) The method of claim 20 wherein adjusting the length of the uncovered portion comprises axially moving the deployable portion relative to the remaining portion.

23. (Original) The method of claim 20 further comprising:

determining a second stent length different than the desired stent length;

selecting a second portion of the stenting structure having the second stent length; and

releasing the second portion in the vessel, wherein the second portion expands to engage a wall of the vessel.

24. (Previously presented) The method of claim 20 wherein applying the radially outward force comprises expanding an expandable member, further comprising adjusting the length of the expandable member to be at least as long as the uncovered portion of the stent.

25. (Previously presented) The method of claim 20, wherein the stenting structure comprises a plurality of stent segments and adjusting the length of the uncovered portion comprises repositioning a first stent segment relative to a second stent segment.

26. (Original) The method of claim 25 wherein the stent segments are connected by separable couplings.

27. (Original) The method of claim 25 wherein the stent segments are unconnected to each other.

28. (Cancelled)

29. (Previously presented) The method of claim 20 wherein the covered stent segment is constrained by a sheath disposed over the covered stent segment.

30. - 32. (Cancelled)

33. (Previously presented) The method of claim 20 wherein adjusting the length of the uncovered portion comprises engaging a valve member against the stenting structure to separate the uncovered portion from the covered portion of the stenting structure.

34. (Currently amended) A method of deploying a stent of selectable length in a vessel, the method comprising:

endovascularly positioning a catheter in the vessel, the catheter having a distal end and a stenting structure releasably disposed therein;

uncovering a portion of the stenting structure prior to deployment from the catheter;

determining a desired stent length;

adjusting the length of the uncovered portion to be at least equal to the desired stent length; and

applying a radially outward force to the stent structure to expand only the uncovered portion from the catheter into the vessel, wherein the uncovered portion expands to engage a wall of the vessel while a remaining portion of the stenting structure remains covered in the catheter, wherein adjusting the length of the uncovered portion comprises engaging a valve member against the stenting structure to separate the uncovered portion from the covered portion of the stenting structure, and ~~The method of claim 33~~ wherein a sheath is slidably disposed over the stenting structure, the valve member being disposed at a distal end of the sheath.

35. (Previously presented) The method of claim 23 wherein the uncovered portion and the second portion are deployed from a fixed position relative to the distal end of the catheter.

36. (Previously presented) The method of claim 20 wherein the stenting structure has a leading end closest to the distal end of the catheter, and wherein adjusting the length of the uncovered portion comprises selecting a desired length of the stenting structure extending proximally from the leading end thereof.

37. (Previously presented) The method of claim 20 wherein the stenting structure is continuously connected through the length thereof, and adjusting the length of the uncovered portion comprises separating the deployable portion of the stenting structure from a covered portion of the stenting structure at a selectable location on the stenting structure.

38. (Previously presented) The method of claim 37 wherein adjusting the length of the uncovered portion comprises severing the stenting structure at the selectable location.

39. (Previously presented) The method of claim 20 wherein adjusting the length of the uncovered portion comprises advancing the desired length of the stent structure distally of the catheter.

40. (Previously presented) The method of claim 37 wherein the uncovered portion is separated following deployment by the deployment mechanism.

41. (Original) The method of claim 37 wherein the stenting structure is a coil.

42. (Original) The method of claim 37 wherein the stenting structure is a mesh.

43. - 49. (Cancelled).

50. (New) The variable length stent deployment apparatus of claim 1 further comprising a therapeutic agent on the stenting structure.

51. (New) The variable length stent deployment apparatus of claim 50 wherein the therapeutic agent inhibits hyperplasia.

52. (New) The variable length stent deployment apparatus of claim 50 wherein the stenting structure comprises a polymeric layer, the polymeric layer adapted to control the rate of delivery of the therapeutic agent.

53. (New) The variable length stent deployment apparatus of claim 50 wherein the stenting structure comprises a bioabsorbable material.

54. (New) The variable length stent deployment apparatus of claim 12 wherein the stenting structure comprises a plurality of stent segments, the deployment mechanism being adapted to select one or more of the stent segments for inclusion in the deployed portion.

55. (New) The variable length stent deployment apparatus of claim 54 wherein the deployment mechanism is adapted to deploy the plurality of stent segments simultaneously.

56. (New) The variable length stent deployment apparatus of claim 54 further comprising a constraining element for constraining expansion stent segments which are not to be deployed.

57. (New) The variable length stent deployment apparatus of claim 56 wherein the constraining element is a sheath retractably disposed over the stent structure and deployment mechanism.

58. (New) The variable length stent deployment apparatus of claim 12 wherein the deployment mechanism comprises an expandable member on the catheter body, the portion of the stenting structure to be deployed being positionable over the expandable member for expansion thereby.

59. (New) The variable length stent deployment apparatus of claim 58 wherein the length of the expandable member can be selected to provide a preselected length of the deployed portion.

60. (New) The variable length stent deployment apparatus of claim 59 wherein the length of the expandable member can be modified by a sheath slidably disposed over the expandable member for constraining expansion of a selected portion of the expandable member.

61. (New) The variable length stent deployment apparatus of claim 58 wherein the stenting structure is movable relative to the expandable member, further comprising a stent positioner for moving a selected portion of the stenting structure relative to the expandable member.

62. (New) The variable length stent deployment apparatus of claim 12 further comprising a valve member on the catheter body adapted to separate the portion of the stent structure to be deployed from the remaining portion.

63. (New) The variable length stent deployment apparatus of claim 12 wherein the stenting structure has a leading end closest to the distal end of the catheter body, and the portion of the stenting structure to be deployed extends proximally a selectable length from the leading end thereof.

64. (New) A variable length stent deployment apparatus as in claim 12, wherein the stenting structure comprises a plurality of stent segments.

65. (New) A variable length stent deployment apparatus as in claim 64 wherein the stent segments are linked by couplings.

66. (New) A variable length stent deployment apparatus as in claim 65 wherein the couplings are separable.

67. (New) A variable length stent deployment apparatus as in claim 64 wherein the couplings are frangible.

68. (New) A variable length stent deployment apparatus as in claim 64 wherein the couplings are bioerodable.

69. (New) The variable length stent deployment apparatus of claim 12 further comprising a therapeutic agent.

70. (New) The variable length stent deployment apparatus of claim 69 wherein the therapeutic agent inhibits hyperplasia.

71. (New) The variable length stent deployment apparatus of claim 69 wherein the stenting structure comprises a polymeric layer, the polymeric layer adapted to control the rate of delivery of the therapeutic agent.

72. (New) The variable length stent deployment apparatus of claim 69 wherein the stenting structure comprises a bioabsorbable material.

73. (New) The method of claim 20 further comprising:

repositioning the catheter in the vessel;

determining a second stent length;

selecting a second portion of the stenting structure having the second length; and

releasing the second portion in the vessel, wherein the second portion expands to engage a wall of the vessel.

74. (New) The method of claim 20 further comprising releasing a therapeutic agent from the stenting structure after releasing the stenting structure in the vessel.

75. (New) The method of claim 74 wherein the therapeutic agent inhibits hyperplasia.

76. (New) The method of claim 74 wherein the stenting structure comprises a polymeric layer, the polymeric layer adapted to control the rate of delivery of the therapeutic agent.

77. (New) The method of claim 74 wherein the stenting structure comprises a bioabsorable material.

78. (New) The method of claim 20 wherein uncovering a portion of the stenting structure comprises retracting a sheath.

79. (New) The method of claim 20 wherein uncovering a portion of the stenting structure comprises advancing a pusher member.

80. (New) The method of claim 20 wherein applying a radially outward force comprises inflating a balloon.

81. (New) The method of claim 20 further comprising severing the uncovered portion from any remaining portion of the stenting structure which remains covered in the catheter.

82. (New) The method of claim 34, wherein adjusting the length of the uncovered portion comprises positioning a first portion of the stenting structure shorter than the desired stent length in a position in the catheter for deployment, and positioning an additional portion of the stenting structure in the catheter adjacent to the first portion for deployment therewith.

83. (New) The method of claim 34 wherein adjusting the length of the uncovered portion comprises axially moving the deployable portion relative to the remaining portion.

84. (New) The method of claim 34 wherein applying the radially outward force comprises expanding an expandable member, further comprising adjusting the length of the expandable member to be at least as long as the uncovered portion of the stent.

85. (New) The method of claim 34 wherein the stenting structure comprises a plurality of stent segments and adjusting the length of the uncovered portion comprises repositioning a first stent segment relative to a second stent segment.

86. (New) The method of claim 85 wherein the stent segments are connected by separable couplings.

87. (New) The method of claim 85 wherein the stent segments are unconnected to each other.

88. (New) The method of claim 34 wherein the covered stent segment is constrained by a sheath disposed over the covered stent segment.

89. (New) The method of claim 34 wherein the stenting structure has a leading end closest to the distal end of the catheter, and wherein adjusting the length of the uncovered portion comprises selecting a desired length of the stenting structure extending proximally from the leading end thereof.

90. (New) The method of claim 34 wherein the stenting structure is continuously connected through the length thereof, and adjusting the length of the uncovered portion comprises separating the deployable portion of the stenting structure from a covered portion of the stenting structure at a selectable location on the stenting structure.

91. (New) The method of claim 90 wherein adjusting the length of the uncovered portion comprises severing the stenting structure at the selectable location.

92. (New) The method of claim 34 wherein adjusting the length of the uncovered portion comprises advancing the desired length of the stent structure distally of the catheter.

93. (New) The method of claim 90 wherein the uncovered portion is separated following deployment by the deployment mechanism.

94. (New) The method of claim 90 wherein the stenting structure is a coil.

95. (New) The method of claim 90 wherein the stenting structure is a mesh.

96. (New) The method of claim 34 further comprising:

repositioning the catheter in the vessel;

determining a second stent length;

selecting a second portion of the stenting structure having the second length; and

releasing the second portion in the vessel, wherein the second portion expands to engage a wall of the vessel.

97. (New) The method of claim 96 wherein the uncovered portion and the second portion are deployed from a fixed position relative to the distal end of the catheter.

98. (New) The method of claim 34 further comprising releasing a therapeutic agent from the stenting structure after releasing the stenting structure in the vessel.

99. (New) The method of claim 98 wherein the therapeutic agent inhibits hyperplasia.

100. (New) The method of claim 98 wherein the stenting structure comprises a polymeric layer, the polymeric layer adapted to control the rate of delivery of the therapeutic agent.

101. (New) The method of claim 98 wherein the stenting structure comprises a bioabsorable material.

102. (New) The method of claim 34 wherein uncovering a portion of the stenting structure comprises retracting a sheath.

103. (New) The method of claim 34 wherein uncovering a portion of the stenting structure comprises axially moving a sheath relative to a pusher member.

104. (New) The method of claim 34 wherein applying a radially outward force comprises inflating a balloon.

105. (New) The method of claim 34 further comprising severing the uncovered portion from any remaining portion of the stenting structure which remains covered in the catheter.